



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/911,126	07/23/2001	Owen Jones	272PQ-C1	2925

61802 7590 01/03/2007  
LEVEQUE INTELLECTUAL PROPERTY LAW, P.C.  
221 EAST CHURCH STREET  
FREDERICK, MD 21701

EXAMINER
----------

MEI. XU

ART UNIT	PAPER NUMBER
----------	--------------

2615

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/03/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b> 09/911,126	<b>Applicant(s)</b> JONES, OWEN	
	<b>Examiner</b> Xu Mei	<b>Art Unit</b> 2615	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 October 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14, 16-20, 26-29, 31-38, 40-46, 51, 55-63 and 67-92 is/are pending in the application.
- 4a) Of the above claim(s) 43-46, 48-51, 55-63 and 67-92 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 19, 20, 38, 40 and 41 is/are allowed.
- 6) ☒ Claim(s) 1-12 and 35-37 is/are rejected.
- 7) ☒ Claim(s) 13, 14, 16-18, 26-29, 31-34 and 42 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. This communication is responsive to the applicant's amendment dated 10/12/2006.

#### ***Response to Arguments***

2. Applicant's arguments filed 10/12/2006, with respect to the rejection(s) under 35 USC 103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Ruberl (US Patent 4,521,741).

#### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Douglas (US Patent Application Publication 2001/0050993) in view of Ruberl.

Regarding Claim 1, Douglas discloses a noise cancellation system (Fig. 4) having compatibility with existing socket configurations (Fig 3, sockets 12 and 13), comprising: an active headset (20'), having at least a first earphone (Fig. 1, earphone 4), a first microphone (paragraph 35), and a first gain control element that provides gain control of the first microphone (paragraph 37), a noise cancellation circuit that is located

Art Unit: 2615

remotely from the active headset (Fig. 3, unit 30, and a plurality of electrical connections for connecting the noise cancellation circuitry to the active headset (Fig. 4, connections on plug 22'). Douglas does not disclose a current source element coupled in series to the first microphone to provide a correct bias voltage to said first microphone.

Ruberl discloses an impedance transformer circuit for a microphone (col. 1, lines 55-57) comprising a current source (transistor T1) to supply a bias voltage to a microphone (see Fig. 2 and col. 2, lines 6-53) improving signal-to-noise ratio of the amplifier output.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the microphone of the ANR system of Douglas with a impedance transformer circuit that include a current source to supply a bias voltage to a microphone, as taught by Ruberl, in order to improving signal-to-noise ratio of the amplifier output for the microphone.

Regarding Claim 2, Douglas further discloses the active headset is a stereo headset further comprising a second earphone (3), a second microphone (paragraph 35), and a second gain control element that provides gain control of the second microphone (paragraph 37), and wherein the maximum number of electrical connection is seven (It would have been obvious as a matter of design choice to choose an appropriate maximum number of electrical connections to supply electrical signals to and from a headset).

5. Claim 3-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Art Unit: 2615

Douglas/Ruberl as applied to claim 1 above, and further in view of Moseley (US Patent 5,117,461).

Regarding Claim 3, Douglas/Ruberl discloses a system as stated apropos of claim 1 above but do not disclose the active headset is a mono headset. Moseley discloses a noise canceling headset that can be used in mono or binaural sources (Col. 2, lines 48-50). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have an active headset that can be used in mono. It would have been obvious as a matter of design choice to choose an appropriate maximum number of electrical connections to supply electrical signals to and from a headset.

Regarding Claim 4, Douglas/Ruberl discloses a system as stated apropos of claim 1 above but do not disclose the active headset is a mono headset or comprising a boom microphone. Moseley discloses a noise canceling headset that can be used in mono or binaural sources (Col. 2, lines 48-50) and comprising a boom microphone for communication (Col. 2, lines 40-43). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have an active headset that can be used in mono and a boom microphone for communication as taught by Moseley. It would have been obvious as a matter of design choice to choose an appropriate maximum number of electrical connections to supply electrical signals to and from a headset).

Regarding Claim 5, Douglas further discloses two stereo jack plugs (14' and 15').

Regarding Claim 6, Douglas further discloses two mono jack plugs (16' and 17').

Art Unit: 2615

Regarding Claim 7, Douglas further discloses a stereo jack plug (22').

Regarding Claim 8, Douglas further discloses a stereo jack plug (16') and a mono jack plug (16').

Regarding Claims 9-12, Moseley further discloses pin connectors (Fig. 3c, connector 26, 86, and 88). It would have been obvious to provide an appropriate number of pins as a matter of design choice for the suitable connector.

5. Claims 35-37 rejected under 35 U.S.C. 103(a) as being unpatentable over Douglas/Ruberl as applied to claim 1 above, and further in view of Maruyama (US Patent 6,377,188).

Regarding Claims 35 and 36, Douglas/Ruberl disclose a device as stated apropos of claim 1 above but do not disclose the system in a passenger cabin of a vehicle. Maruyama discloses a headset device integrated in an armrest of an aircraft seat (Col. 2, lines 34-45). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to integrate a headset in a vehicle to allow a passenger to select and listen to audio.

Regarding Claim 37, Douglas further discloses a first and second stereo jack plug (Fig. 4, 14' and 15').

***Allowable Subject Matter***

6. Claims 19, 20, 38, 40, and 41 are allowed.

7. Claims 13, 14, 16-18, 26-29, 31-34 and 42 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Teachout discloses a condenser microphone including a bootstrap circuit for providing impedance matching between the condenser microphone and a preamplifier circuit.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Xu Mei whose telephone number is 571-272-7523. The examiner can normally be reached on maxi flex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Xu Mei  
Primary Examiner  
Art Unit 2615  
12/13/2006